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MEASURING THE ATTITUDES AND AWARENESS OF ENVIRONMENTAL EDUCATION CAMP USERS

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Abstract

Questionnaires for evaluating what people expect from environmental camps and what they learn while there have been developed and applied at the Pocono Environmental Education Center, Dingman's Ferry, Penna. Nine questionnaires for various ages and types of users are presented. The results can be used by camp administrators and educators to evaluate their own programs and teaching methods.

INTRODUCTION

WHAT DO PEOPLE EXPECT to get from environmental camps? What do they actually go away with? How can the quality of user experiences be improved? These are questions that every camp director needs to answer if he expects to provide meaningful and rewarding encounters. Techniques designed to answer such questions were recently developed and used at the Pocono Environmental Education Center (PEEC). The study was a cooperative venture between PEEC, New York University, and the U. S. Forest Service. Dr. Fred Geis was the principal investigator.

Results are presented here in the hope that other camp administrators and educators can use these techniques to evaluate their own programs and teaching methods to better satisfy the needs of their clientele.

WHAT IS PEEC?

PEEC is a year-round base of operations for conferences, short-term institutes and workshops. Keystone Junior College of LaPlume, Pennsylvania, and the National Park Service cooperate in providing housing, study facilities, and program assistance at the camp for students (elementary through college) and virtually any other interested groups. The center is located in northeastern Pennsylvania within the Delaware Water Gap National Recreation Area. The majority of PEEC users come from metropolitan areas like New York City and Philadelphia. They represent a wide variety of backgrounds, ages, incomes and interests. Most first-time visitors have at least one thing in common: They know very little about the environment.

STUDY RESULTS

Nine questionnaires designed to measure the attitudes and awareness of environmental camp users were developed, tested, refined, and used at PEEC during 1976 and 1977. Key findings of that research, including summaries of user responses to questionnaires, are presented here.

Precamp attitudes of school groups

Data were collected from 12 groups, including 153 school children, ages 10 to 16. Results show that virtually all were looking forward to their visit to PEEC (Fig. 1). In fact, comparison of these data with group leader responses (Figs. 4 and 5) indicates that the kids were more confident and secure about the trip than their leaders.

Figure 1.—PRECAMP ATTITUDES OF SCHOOL GROUPS

Directions: (To be read to the students)

Think about each question and then answer it by circling *Yes* or *No* next to the question. Answer each question even when you decide you are not positively sure whether the answer is yes or no. When you are not sure just decide which is closest to what you think. (Then read each question to students and have them respond, if you feel they will have trouble on their own.)

Questions:	*Responses (in percent)*	
	Yes	*No*
1. Have you talked to anyone who has been to PEEC?	94	6
2. Are you happy to be going to PEEC?	99	1
3. Are you worried about any part of your trip?	2	98
4. Have you ever taken hikes in the country or in the woods?	99	1
5. Do you feel that you can learn more about nature at PEEC then where you usually meet?	99	1
6. Do you feel that you will have more free time at PEEC than where you usually meet?	52	48
7. Are your parents worried about sending you to PEEC?	2	98
8. Do you feel that you will miss anything by being away from where you usually meet for 3 or more days?	4	96
9. Do you feel that you know enough about what will take place at PEEC?	61	39
10. Did you have a chance to help in planning what you will do at PEEC?	35	65
11. Circle yes for all the places you have visited:		
Museum	65	35
Park or Nature Trail	85	15
Seashore or Beach	30	70
Zoo	60	40
Bird Sanctuary	25	75

Postcamp attitudes of school groups

The sample consisted of 324 urban children from 15 groups and 1,056 suburban and rural children from 27 groups. Ages ranged from 9 to 16 years. Rural and suburban users seemed happier or more positive about PEEC than urban users in almost all areas except food (Fig 2). PEEC's meals led the list with urban kids and even carried over into an enjoyment for doing kitchen chores. The ASE's (Action Socialization Experiences—a series of difficult tasks designed to encourage group cooperation), hikes and swimming were given high ratings by all groups but were also just as frequently cited as negative experiences. Interview data indicated that this reaction was due primarily to the level of stress or effort involved. Those in adequate physical shape to participate fully in the activities enjoyed them. Those less well equipped or prepared did not enjoy them as much.

Figure 2.—POSTCAMP ATTITUDES OF SCHOOL GROUPS

Directions: (To be read to the students)

Answer each question by circling *Yes* or *No* next to the question. If you are not positively sure whether the answer is yes or no, decide which is closest to what you think. (Then read each question to students and have them respond, if you feel they will have trouble on their own.)

Questions:	*Responses (in percent)*					
	Urban users			*Suburban and rural users*		
	Yes	*No*	*NA*	*Yes*	*No*	*NA*
1. Do you feel that being at PEEC was better than:						
a) A one-day field trip?	74	19	7	90	7	3
b) Visiting with your relatives out of town?	43	48	9	70	26	4
c) The same amount of time at a summer overnight camp or scout camp?	69	24	7	69	26	5
2. Which things did you enjoy doing at PEEC:						
a) Studying science in the field?	47	39	14	58	37	5
b) Studying other school subjects in the field?	44	44	12	45	41	14
c) Getting to know your classmates better?	72	11	17	82	6	12
d) Getting to know your teachers better?	72	18	10	77	20	3
e) Doing kitchen chores at PEEC?	56	33	11	21	70	9
f) Learning the rules of how to live together	16	77	7	70	27	3
3. Did the program at PEEC turn out as you had originally expected?	50	45	5	44	50	6
4. Do you feel that the size of the group was good for this trip?	83	16	1	88	11	1
5. Do you feel that some of your teachers who were with you have gotten to know you better?	82	16	2	83	14	3
6. Have you made any new friends among your classmates while at PEEC?	82	17	1	71	27	2
7. Do you feel that living in a cabin with other students was good?	92	7	1	91	8	1
8. Would you have liked to have had more time to do school work during the trip?	15	85	—	14	83	3
9. Do you feel that the sleeping arrangements were good?	86	13	1	86	12	2
10. Do you feel that the meals were good?	95	4	1	90	8	2
11. Do you feel this trip should be shorter in length?	5	93	2	4	94	2
12. Would you like to go to PEEC again?	97	3	—	95	4	1
13. Do you think you learned a lot at PEEC?	95	4	1	88	10	2

For students over the 5th grade:

Questions:	*—Most frequent responses—* *Urban users*	*Suburban and rural users*
14. What PEEC activity did you learn the most from?	ASE's[1] Bird walk Hikes Nature crafts Swimming	Stream & pond study Fossils Compass work Dancing Survival
15. What impressed you most about PEEC?	Braille trail Hiking Swimming Cabins Food	Hikes ASE's Cabins Braille trail Snake show Swimming
16. What activity did you enjoy the least?	ASE's Bird walk Films Hiking Nature crafts Sports Swimming Arts and crafts Soil study	Forestry Compass work Plot study Ecology Eating Discovering PEEC Arts and crafts Hikes Films Pond study

[1] Action Socialization Experiences—a series of difficult tasks designed to encourage group cooperation.

Environmental awareness test

Data were obtained from eight groups, all of urban children, a total sample of 183. Results indicate childrens' lack of historical perspective regarding population growth and land development and reveal the dependence that specialization imposes (Fig 3).

Figure 3.—ENVIRONMENTAL AWARENESS TEST

Directions:

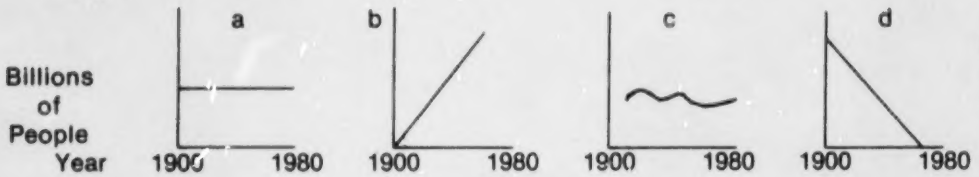
Circle the answer you feel is correct. If you are not sure, circle the answer which is closest to what you think is right.

Questions: *Responses*

(Numbers indicate percent of responses to that question. * indicates correct response.)

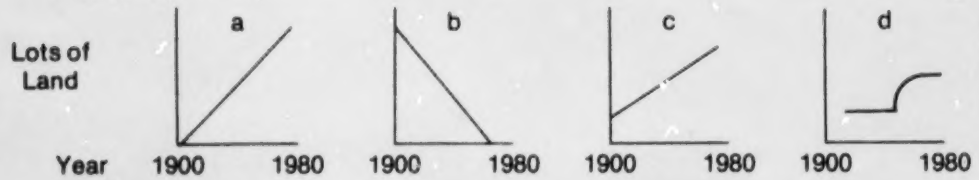
1. The environment is:
   a) Woods and lakes — 32
   b) Cities and factories — 8
   c) Pollution — 6
   d) All our surroundings — 54*

2. Which drawing best shows what is happening to the number of people in the world?



   a) 16
   b) 26*
   c) 39
   d) 19

3. Which drawing best shows what is happening to the amount of land for farms and forests?



   a) 19
   b) 31*
   c) 14
   d) 36

4. Most people live in cities because:
   a) Woods are dangerous with wild animals — 19
   b) There are more jobs in cities — 70*
   c) It is cold and lonely in the country — 4
   d) They like movies and music — 7

5. When lots of people live close together like in cities:
   a) It is easier to feed them and clean the garbage up — 9
   b) You can have better schools and stores — 28
   c) It is better because you keep the pollution all in one place — 18
   d) It is important to keep things clean because disease would spread easily — 45*

6. The reason the woods at PEEC are cleaner than New York City parks is:
   a) They have lots of people cleaning up — 15
   b) Country air is cleaner — 18
   c) People who visit PEEC are more careful not to pollute while they are there — 61*
   d) Wild animals eat the garbage — 7

7.	Before people came, the land New York City is on looked:	
	a) Kind of like an empty lot does	8
	b) Sort of like Central Park does	5
	c) Sort of like the woods at PEEC	40*
	d) Nothing was there until they built the city	47
8.	New York City's water comes:	
	a) From pipes	25
	b) From the ground	18
	c) From the Hudson River	10
	d) From lakes and rivers far away from the city	47*
9.	New York City's food comes:	
	a) From stores	10
	b) Only from farms in New Jersey	2
	c) Only from farms in California	0
	d) From farms all over the world	88*
10.	If farmers stopped working, city people would:	
	a) Have to eat canned and frozen food	10
	b) Probably starve to death	20*
	c) Have to eat artificial food	10
	d) Have to grow their own food	60
11.	In terms of pollution you can say that:	
	a) Both children and adults cause pollution	76*
	b) Children are against pollution but adults don't care	7
	c) Adults are against pollution but children don't care	9
	d) Only adults cause pollution	8
12.	The hardest part of having a clean environment is:	
	a) Getting everyone to cooperate	75*
	b) Having scientists find solutions	9
	c) Deciding which buildings to tear down	7
	d) Getting factories to be clean	9
13.	Most people don't keep the environment clean because:	
	a) They don't know how	7
	b) They don't care	64
	c) They aren't responsible for the mess	18
	d) It costs them time and money	11*
14.	The most important reason for having a clean environment is:	
	a) It looks much nicer	20
	b) We need it for our health	50*
	c) We need it for wild animals and trees	14
	c) We wouldn't have to spend so much money	16

Precamp attitudes of group leaders

The sample consisted of 14 groups with a total of 41 leaders. Most listed personal, social, and leadership development as prime reasons for coming to PEEC (Fig. 4). Features of greatest interest were hiking and other outdoor activities.

Figure 4.—PRECAMP ATTITUDES OF GROUP LEADERS

		Most frequent responses
1.	Why did you select PEEC for your group?	Low cost, pleasant facilities, environmental science theme, location, helpful staff, type of programs.
2.	What activities, facilities, or services at PEEC are of greatest interest to you?	Hiking and other outdoor activities.
3.	If you had only one goal you could fulfill at PEEC, what would it be?	80% listed personal, social, or leadership development, the rest listed learning about the environment and fun.
4.	Do you feel you can achieve your goals for your group better at PEEC than where you generally meet? Why?	Yes, because of price and opportunities for group work.
5.	How many people are involved in planning your PEEC experience?	Average 4.5
6.	Do you feel that you know enough about PEEC to plan your experience? If not, why not?	Yes, although some were confused about timing and nature of some activities.
7.	Are you planning to utilize any members of the PEEC staff in planning your PEEC experience?	Most said yes—less than 10% wanted to be left on their own.
8.	How can PEEC be of help to you between now and the time your group comes to PEEC?	Want to know more about resources at PEEC. Provide a list of activities related to seasons.
9.	In terms of pre-PEEC preparation do you feel:	
	a) You and the other leaders are ready?	95% Yes
	b) The participants are ready?	100% Yes

Evaluation of preparation sessions by group leaders

Preparation sessions give group leaders a chance to learn about the facility and its programs. Data were collected from six groups with 102 individuals responding. All data were obtained from the urban groups as they were the only groups that had large organized leader preparation sessions at PEEC. Most all group leaders felt the preparation sessions were worthwhile (Fig. 5). They were most apprehensive about being able to coordinate all activities in the time allowed.

Figure 5—EVALUATION OF PREPARATION SESSIONS BY GROUP LEADERS

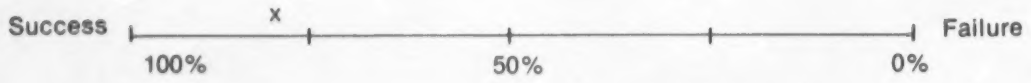
Questions:	*Responses (in percent)* Yes	No
1. Do you feel that the activities at PEEC were well organized?	85	15
2. Do you feel that the time at PEEC in preparation for your group's trip was enough?	76	24
3. Was the time you spent at PEEC generally worthwhile?	95	5
4. Were the orientation activities organized to make good use of your time?	83	17
5. Did the orientation sessions provide you with the information you need?	64	36
6. Do you feel prepared to bring your group to PEEC?	69	31
7. Do you feel PEEC is prepared for your group?	87	13
8. Do you feel bringing your group to PEEC will be worth the work and expense?	91	9
9. What changes would you recommend in the preparatory program you participated in at PEEC?	More material presented prior to PEEC, more teacher input, more free time, better planning for evening activities with kids.	
10. What activity do you feel was most worthwhile for you?	Hikes, ASE's, seeing PEEC facilities.	
11. What did you enjoy most during your stay at PEEC?	Social hour, being outdoors.	
12. What are your greatest apprehensions about bringing your group to PEEC?	That we won't be able to coordinate all things in the time we have, kids will go wild.	
13. In what aspects of the PEEC programs do you feel least adequate?	Knowledge of nature activities, managing kids outdoors.	
14. In what program areas do you feel strongest?	Nature arts and crafts, Braille trail, free time.	
15. How can PEEC be of help to you between now and the time your group comes to PEEC?	Better informative material on hikes, ASE's, and nature activities; help divide kids up and help lead activities.	

Postcamp reactions of group leaders

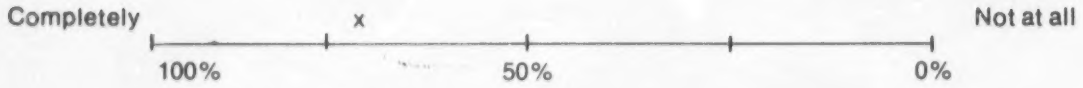
Twenty-four group leaders were interviewed. Of all features at PEEC, trail activities were their overwhelming favorite (Fig. 6). Some leaders complained about how the weather interfered with their program. There was a need for foul-weather activities.

Figure 6.—POSTCAMP REACTIONS OF GROUP LEADERS

1. How successful would you rate your group's trip to PEEC? (x indicates average)



2. To what extent was the success or failure attributable to factors within PEEC's control, such as facilities or activities?



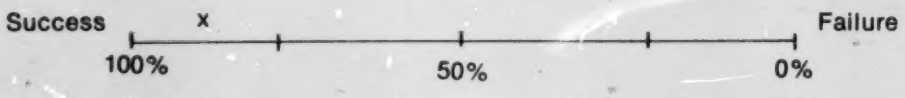
3.	What aspect(s) of PEEC was most useful to your group's activities?	Trails, classrooms, ASE's, locations.
4.	What aspect(s) of PEEC was mentioned most often as fun or interesting?	Trails, swimming pool, ASE's, astronomy, food
5.	What aspect(s) of PEEC was mentioned as a negative influence?	Nothing, food, non-PEEC factors such as weather
6.	If PEEC had $50,000 to invest in facilities or programs, what would you advise them to do with the money?	Expand trails, trail guides, and camping facilities; expand structured programming and nature study activities; increase staff, build gym, improve food, upgrade cabins; maintenance; subsidize rates.

Postcamp attitudes of adult participants

Data came from 12 groups with a total sample of 263 individuals. Most adults rated their trip to PEEC a success (Fig. 7). Their favorite activities were hiking and swimming. There were some complaints, mainly concerning cabin maintenance.

Figure 7.—POSTCAMP ATTITUDES OF ADULT PARTICIPANTS

1. How would you rate your activities at PEEC? (x indicates average)



2. What did you most enjoy about PEEC?	More than 50% mentioned hiking trails, 35% mentioned swimming pool, 15% mentioned the surroundings and nature.
3. What aspect of PEEC caused the most problems for you?	25% mentioned problems with cabins (heat, plumbing, beds), 10% mentioned lack of alternate rainy weather activities.
4. If you were going to recommend one change or addition to PEEC, what would it be?	20% said improve cabin maintenance, 20% said more evening and indoor activities, 15% said more volleyball areas, 10% said to open the store longer and add more stock.

Precamp attitudes of college groups

This sample came from two groups with 58 respondents. The college students have had some environmental education (Fig 8). They weren't sure what to expect from PEEC but were looking forward to the experience.

Figure 8.—PRECAMP ATTITUDES OF COLLEGE GROUPS

Questions:	*Responses (in percent)* Yes	No
1. Have you spoken to anyone who has already been to PEEC?	100	—
2. Have you participated in courses which have involved field study?	93	7
3. Have you ever taken hikes in the country or in the woods?	100	—
4. Do you feel that you can learn more about nature at PEEC than where your class usually meets?	83	17
5. Do you feel that you will experience more recreational activities at PEEC than at school?	95	5
6. Do you feel that you know enough about what will take place at PEEC?	49	51
7. Did you have a chance to help in the planning of the activities that you will experience at PEEC?	53	47
8. Are you looking forward to your PEEC experience?	95	5

Postcamp attitudes of college groups

Respondents totaled 183 persons from eight groups. College students seemed to be favorably impressed with their PEEC trip (Fig 9). Prime benefits included getting to know their classmates and teachers better in a group living and learning experience.

Figure 9.—POSTCAMP ATTITUDES OF COLLEGE GROUPS

Questions:	*Responses (in percent)* Yes	No
1. Do you consider that the PEEC experience was generally better than:		
a) A series of field trips.	97	3
b) A laboratory learning experience	99	1
c) A textbook learning experience	99	1
2. Do you feel that the major benefits to you during this program include:		
a) Studying science in the field	48	52
b) Studying any school subject in the field	65	35
c) Getting to know your classmates better	91	9
d) Getting to know your teacher better	86	14
e) Doing dining hall chores at PEEC	23	77
3. Did the program at PEEC turn out as you had originally expected?	52	48
4. Do you feel the size of the group was good for this experience?	98	2
5. Do you feel the student-instructor interaction at PEEC is different from that at school?	91	9
6. Have you made any new friends among your classmates while at PEEC?	97	3
7. Do you feel that the cooperation in group living by the students was good?	98	2
8. Would you like to have had more time to study independently while at PEEC?	56	44
9. Would you like to go to PEEC again for a similar experience?	100	—
10. Do you consider that your experience at PEEC was generally worthwhile?	100	—
11. Do you feel that the sleeping arrangements were?	Poor—0% Satisfactory—25% Good—46% Excellent—29%	
12. Do you feel the meals were?	Poor—8% Satisfactory—25% Good—35% Excellent—32%	
13. Do you feel that the length of your stay at PEEC was:	Too short—58% Just right—42% Too long—0%	
14. What PEEC activity do you feel you learned the most from?	Braille Trail—30% ASE's—15%	
15. What PEEC activity did you enjoy the most?	Tumbling water—35%	
16. What activity do you think should have been omitted?	No consistent answer	
17 What impressed you most about the PEEC area?	Scenery	

SUMMARY

Nine questionnaires were developed and used to measure the attitudes and awareness of environmental camp users. People at PEEC have already made good use of the techniques and data to improve their program of environmental education.

Most of the study results are so obvious as to speak for themselves. But one particular issue that surfaced continually during the course of the study deserves mention. It concerns the role that environmental camps can play in the development of interpersonal relationships. Most group leaders either openly cited this as a major goal or at least alluded to it as a secondary reason for coming to PEEC. Be it a goal or not, it is a fact that the residential experience, helping each other on hikes and other cooperative group activities did lead to new friendships and understandings. There is clear indication here of an area for fruitful future work. A reasonable working hypothesis would be that people engaged in real tasks that necessitate cooperation, and supplied with some guidance, will form more interpersonal interaction skills and more positive feeling toward others.

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